SERVICE MANUAL

E40.2SR - E50.2SR
Excavator

Print No. 604.13.411

NEW HOLLAND CONSTRUCTION

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3.1 BOOM

3.1.1 BOOM DIMENSIONAL DRAWINGS

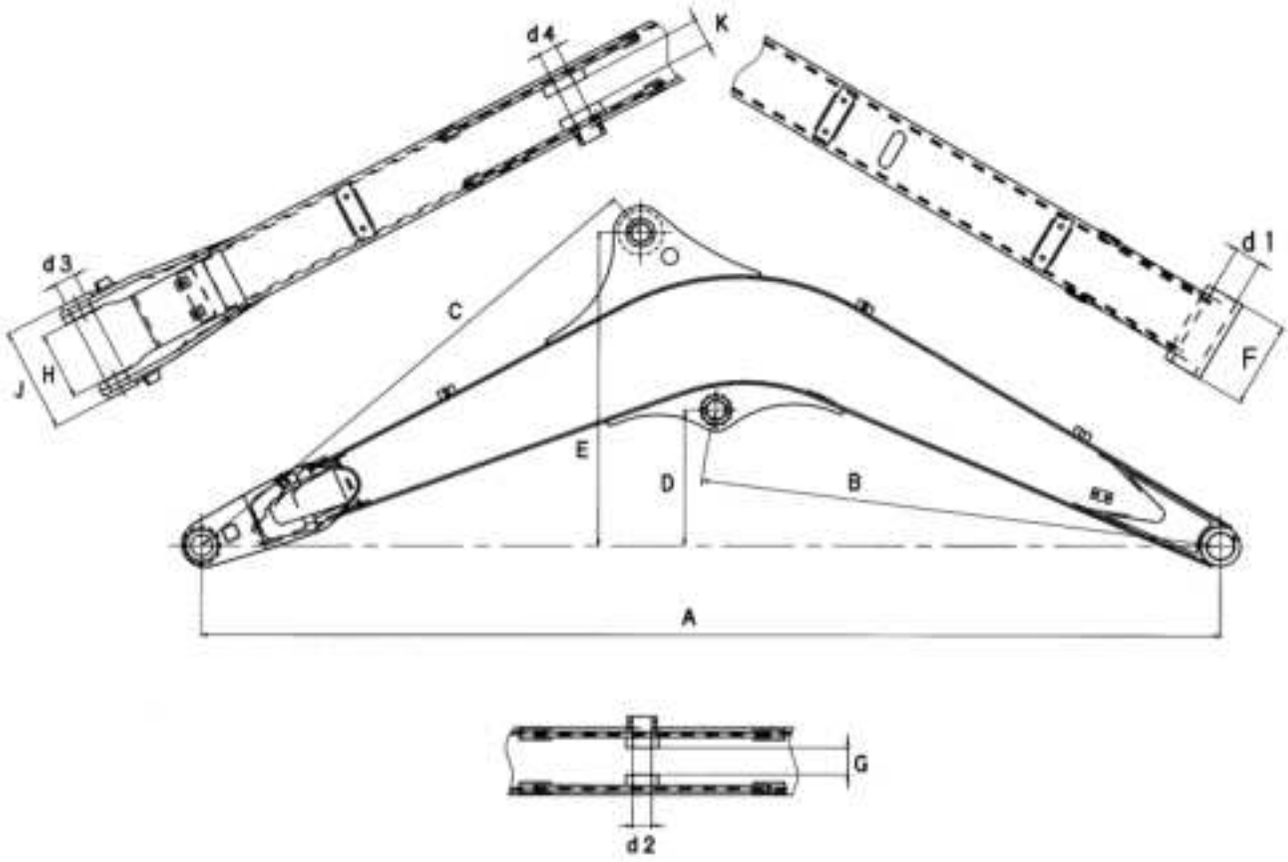


Fig. 3-1 Boom Dimensional Drawings

Table 3-1

Unit: mm (ft•in)

No.	NAME	DIMENSIONS	
		E40.2SR	E50.2SR
A	Boom length	2670 (8'9.12")	2790 (9'1.84")
B	Distance between pins of boss	R1406 (4'7.35")	R1434 (4'8.46")
C	Distance between pins of bracket	R1475 (4'10.1")	R1487.5 (4'10.6")
D	Height of boom cylinder rod pin	470 (18.5")	457.5 (18.0")
E	Height of arm cylinder (head side) pin	941.5 (37.1")	908 (35.7")
F	Boom width	250 (9.84")	←
G	Inner width of bracket for boom cylinder (rod side) mounting	76 (2.99")	←
H	Boom end inner width	175 (6.89")	←
J	Boom end outer width	265 (10.4")	←
K	Inner width of bracket for arm cylinder (head side)	66 (2.60")	←
d1	Boom pin dia. [Bushing outer dia.]	ø50 (1.97") [ø60 (2.36")]	←
d2	Boom cylinder (rod side) pin dia.	ø50 (1.97")	←
d3	Pin dia. of arm end	ø60 (2.36")	←
d4	Arm cylinder (head side) pin dia.	ø45 (1.77")	←

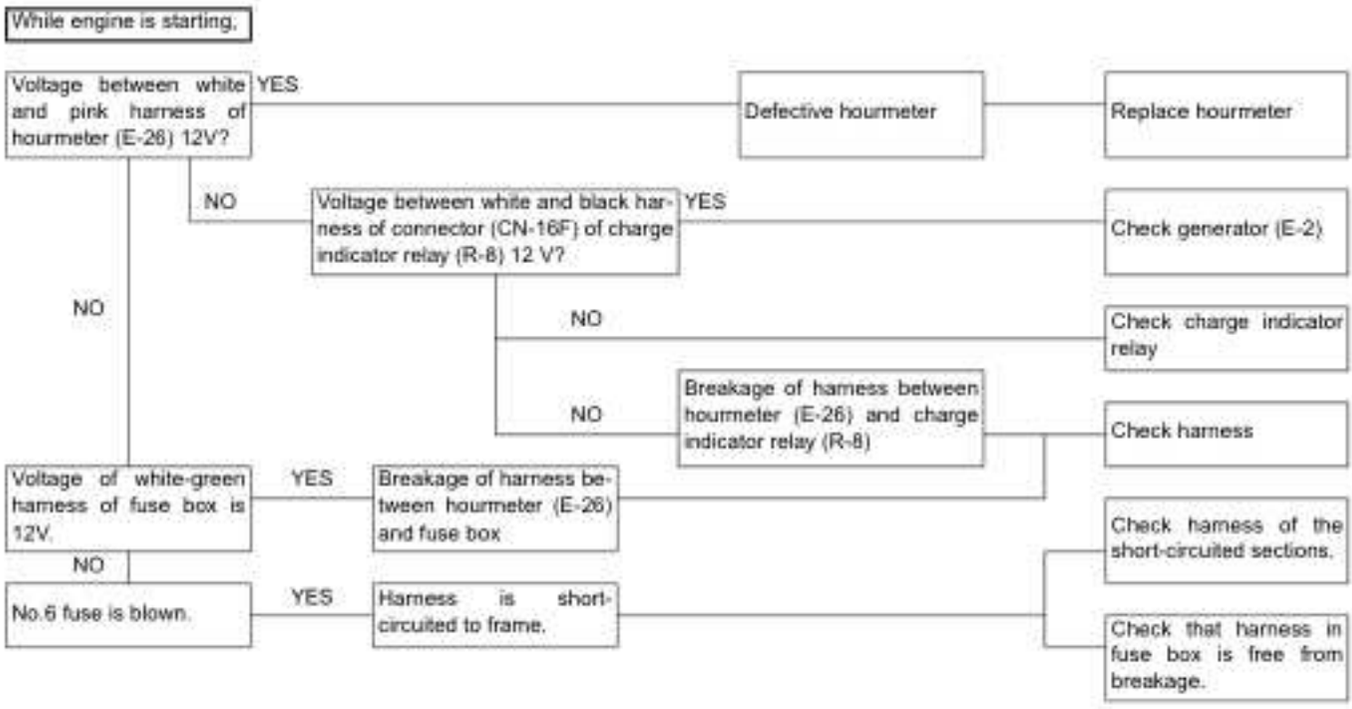
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32.2.1.8 POSSIBLE CAUSES FOR TROUBLE AND REMEDY

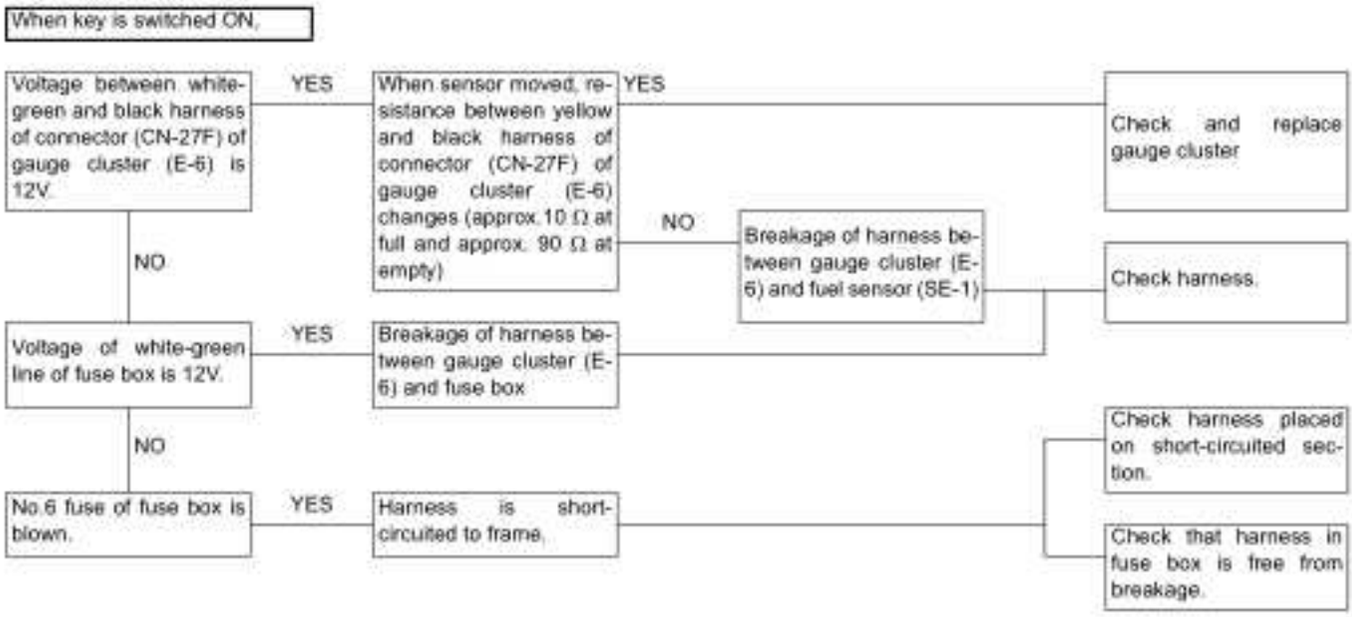
Trouble Conditions	Major Possible Causes	Remedy
Oil leakage from sliding face of piston rod. (A ring shape oil is formed on piston rod and enlarged resulting dripping down of oil)	• Foreign matter is caught by U-ring or wiper ring at its inside periphery.	• Remove foreign matter.
	• Scuffing or fault on U-ring or wiper ring at its inside periphery.	• Replace each part with new one.
	• Scuffing on sliding face of piston rod.	• Grind sliding face with a fine oil stone. (less than 1.6S)
		• If leakage is not stopped by grinding, replace seals such as U-ring, etc. with new ones.
		• If leakage is not stopped by replacing seals, replace piston rod.
	• Peeling off of hard chrome plating.	• Re-plating of hard chrome on piston rod.
Oil leakage from outer periphery of cylinder head.	• Damages on O-ring.	• Replace.
	• Damages on back-up ring.	• Replace.
Oil leakage from welded portion.	• Damages on welded portion on tube.	• Replace.
Piston movement due to leakage. (For the case when static load that is equivalent to product of multiplication of max. working pressure and cylinder area, is applied to rod, max. movement of piston is larger than 0.5mm (0.02 in)) per 10 minutes.	• Foreign matter is caught by sliding face of slide ring.	• Remove foreign matter.
	• Scuffing or faulty condition on sliding face of slide ring.	• Replace.
	• Scuffing on sliding face of seal ring assembly.	• Replace.
	• Damages on O-ring.	• Replace.

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43.2.1.4 Hourmeter does not actuate.

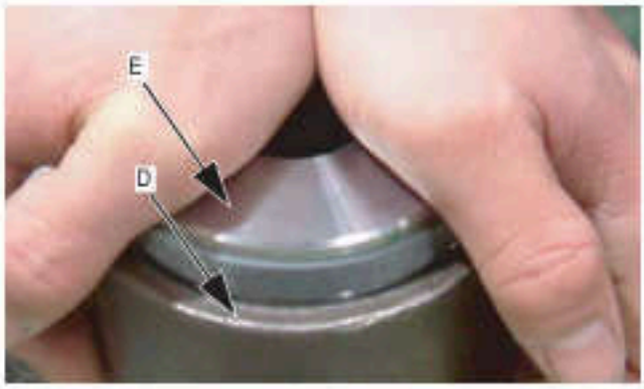


43.2.1.5 Fuel gauge does not actuate.



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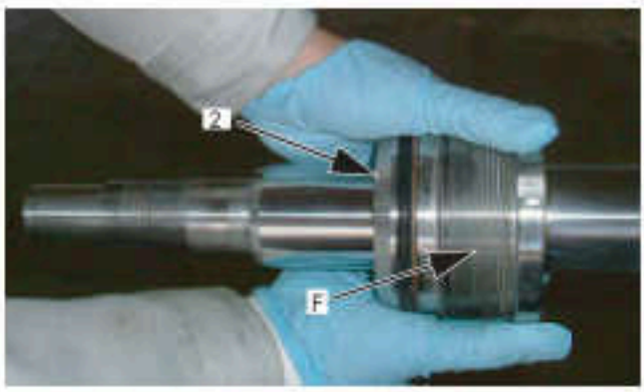
3) The O-ring of seal ring was extremely stretched at the installation, insert the piston subassembly (E) from the taper side of reforming jig (D) to reform the ring.



(4) Assembly of piston rod

1) Keep clevis of piston rod (2) horizontal, and install the head sub-assembly (F).

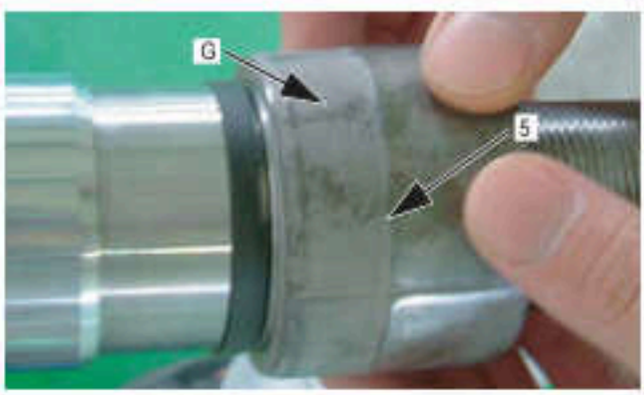
- Apply hydraulic oil to seal slightly.
- Take care not to hit the seal against the thread of piston rod.



2) Face the slit of seal ring (12) to the thread, and install the seal ring into groove of piston rod. Install the cushion bearing (5) on the rod from taper (G) side as shown in the photo.

- Take care of the direction of seal ring and cushion bearing.
  If the direction is mistaken, the cushion effect is not obtained.





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(6) Assembling hydraulic motor section

1) Put three rollers (151) into the holes of the cylinder block (104).

2) Place the thrust ball (108) on the cylinder block (104).



Fig. 34-168 Installing rollers (151)

3) Fit seven piston assemblies to the retainer plate (107).

- After assembling, immerse the whole unit in hydraulic oil.

4) Fit the retainer plate (107) and the seven piston assemblies to the cylinder block (104).

- Carefully match the retainer plate (107) with the spherical part of the thrust ball (108) for installation.

5) Insert the cylinder block (104) onto the drive shaft (102).

- For installation, align the spline hole in the cylinder block (104) with the spline shaft of the drive shaft (102).
- After installing the cylinder block, turn it by hand to make sure that it fits properly. If not, inspect it.
- Do not take up the cylinder block (104). Otherwise the thrust balls (108) may come off, leading to abnormality in rotation.



Fig. 34-169 Assembling piston assembly into retainer plate

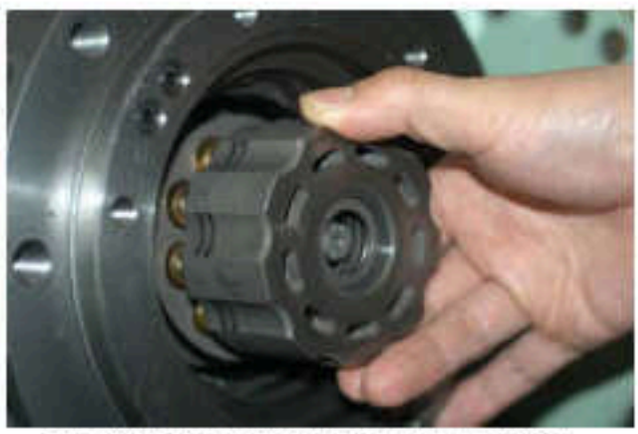


Fig. 34-170 Inserting cylinder block (104)

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